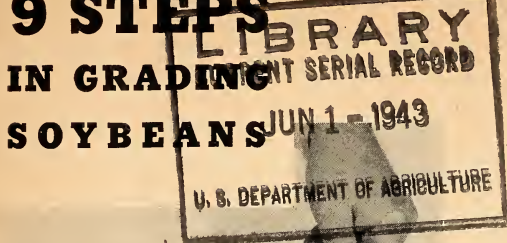


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9 STEPS IN GRADING SOYBEANS



Farmers know they cannot get top prices for dirty wool, mixed eggs, or tree-run apples. The same is true of low-grade soybeans. This folder shows you how to tell soybeans of high grade.

EXTENSION SERVICE

United States Department of Agriculture

AWI-35

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SAMPLE

1. Start with a fair sample of the soybeans (1).* (Grain graders use a long metal trier or probe to draw a sample.)

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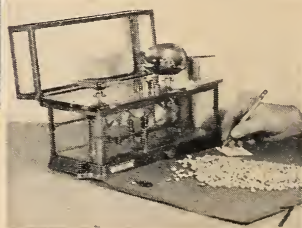
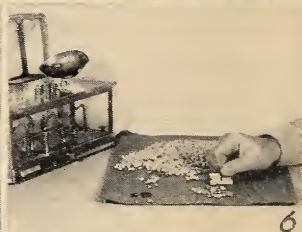
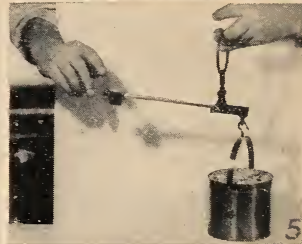
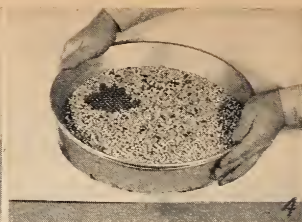
2. Smell the sample (2). Soybeans with a musty, sour, or other bad odor will be graded as Sample. Soybeans can grade No. 1, No. 2, No. 3, No. 4, or as Sample. Sample grade is the lowest. The higher grades bring higher prices. No. 2 is the grade used most in the grain business.

MOISTURE

3. Soybeans must be dry to keep from spoiling in the bin. Grade No. 2 may have no more than 14 parts of water to 100 parts of soybeans (or 14 percent). Grain inspectors make tests for water content with moisture machines (3). Most farmers know by the hardness of the grain when soybeans are dry enough to store safely.

DOCKAGE

4. Soybeans should be clean. Dirt and weed seeds lower the price. Inspectors clean soybean samples with a screen



or sieve. The sieve has round holes one-eighth of an inch across (4). Dirt and other matter taken out with this sieve is called "dockage." The farmer is not paid for this dockage when he sells his soybeans.

FOREIGN MATTER

5. The dockage sieve does not take out coarse material. Sticks, pods, weed

*Numbers in parentheses refer to illustrations.

stems, and large weed seeds such as those of cockleburs, morning-glory, horsenettles, or groundcherries are sometimes found in soybean samples. To grade No. 2, soybeans cannot contain over 2 percent of such things.

TEST WEIGHT

6. Good soybeans are plump and heavy. Grain inspectors use a brass quart measure and beam in making the weight test (5). No. 2 soybeans must test at least 54 pounds to the bushel. Farmers with clean, dry, ripe soybeans never have trouble with this weight test.

MIXED COLORS

7. Soybeans of different colors, such as black or brown in yellow, lower the value. Keep black and brown beans away from the yellow. Over 5 percent black or brown in yellow throws the sample into the mixed class.

SPLITS

8. When soybeans are very dry they may split when they go through the combine. A slower cylinder speed in the combine is needed for extra-dry soybeans. To be in No. 2 grade, not over 15 percent of the beans may be split.

DAMAGE

9. Soybeans are used for food.

Moldy, rotten, or frozen beans are not wanted and the damaged beans cannot exceed 3 percent if the soybeans are to grade No. 2. Inspectors cut some of the beans in half with a sharp blade to be sure the damage has gone through the outside skin (6). When cut open, sound, ripe soybeans usually show a creamy-yellow color; any great difference in color indicates that the bean is damaged. If damp soybeans heat in the bin, the kernels may turn brown inside and look like an over-roasted peanut. This is called heat damage, and mills do not want heat-damaged soybeans.

Grain inspectors use small scales or balances to make correct tests of what the sample has in it. After your soybean sample is tested by the inspector it is graded (7). If it does not pass for No. 1, it may be No. 2, No. 3, No. 4, or Sample grade.

The inspector must give his reason for assigning the grade he gives to the soybeans. If you are not satisfied with the grade, you may appeal to the district grain supervisor, United States Department of Agriculture.

HIGH-GRADE SOYBEANS—

Have a GOOD NATURAL ODOR.

Are DRY AND CLEAN, PLUMP AND HEAVY.

Are NOT MIXED WITH SOYBEANS OF ANOTHER COLOR.

Do NOT have many SPLIT OR DAMAGED BEANS.

WHAT FARMERS CAN DO TO GROW SOYBEANS THAT WILL GRADE HIGH:

1. USE GOOD SEED. Get a high oil-yielding variety recommended by your own State experiment station.

2. MAKE A GOOD SEEDBED. Work the ground well to kill weeds before planting the seed. Plant soon after corn, when the ground is warm, and preferably in rows, so that beans can be cultivated. Late-planted beans may not ripen and may lodge in the field. Inoculate the soil when soybeans are sown on land for the first time.

3. HARVEST CAREFULLY. Do not combine until the seed is fully ripe. When soybeans are very dry, be careful not to split the seeds in combining or threshing. To prevent spoilage, soybeans should be thoroughly dry before they are put into the bin.

For more information about soybeans call your county extension agent or write to your State agricultural college.

Licensed grain inspectors and Federal grain supervisors of the War Food Administration, United States Department of Agriculture, are the officials located in the larger grain markets who can give you further advice on grading soybeans.